

Date: Wednesday, 1/23/2008 11:31:33 AM
 User: Kim Johnston

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services	Drawing Name : TUNNEL BOTTOM PANEL	
Job Number : 36911 -2		
Estimate Number : 13026		
P.O. Number :	Part Number : D3649041	
This Issue : 1/23/2008 S.O. No. :	Drawing Number : D3649 REV.B U/R	
Prsht Rev. : NC	Project Number : N/A	
First Issue : 1/1 Type : SMALL /MED FAB	Drawing Revision : B U/R	
Previous Run : 35710	Material :	
Written By : <u>[Signature]</u>	Due Date : 2/29/2008	Qty: <u>2</u> Um: Each
Checked & Approved By : <u>[Signature]</u>		
Comment : Est Rev:A New Issue 07-09-26 EC verified by: DD		
Est Rev:B ECN 1113P 08-01-22 DD		



Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0	M304S26GA	304/316 0.018 SHEET
-----	-----------	---------------------



Comment: Qty.: 6.3725 sf(s)/Unit Total : 12.7449 sf(s)
 304/316 SS sheet 26 ga (0.018" thick)

Batch: 106946 B 8-2-4

2.0	WATER JET	FLOW WATER JET
-----	-----------	----------------



Comment: FLOW WATER JET

1-Cut as per Dwg D3649

Dwg Rev: B B 8-2-4Prog Rev: B2-Debur if necessary B 8-2-4

3.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE
-----	-----	--



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

4.0	QC8	SECOND CHECK
-----	-----	--------------



Comment: SECOND CHECK

08-02-04 (2)

5.0	BRAKE NC	NC BRAKE
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Comment: NC BRAKE

Form as per Dwg D3649

08-03-13 (2)

Job Number: 36911

Part Number: D3649041

Job Number:



Seq. #: Machine Or Operation: Description:

6.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

S007/16 @

7.0

MS210603K

Nut Plate

Comment: Qty.: 22.0000 Each(s)/Unit Total: 44.0000 Each(s)
Nut Plate

M105935

M106966

08/07/16 (25) SB

8.0

MS210623K

Nut Plate

Comment: Qty.: 22.0000 Each(s)/Unit Total: 44.0000 Each(s)
Nut Plate

M105935

* M105938

8/08/07/16 (18) SB

9.0

MS20427M33

Rivet

Comment: Qty.: 88.0000 Each(s)/Unit Total: 176.0000 Each(s)
Rivet

M106993

SB * 08/07/16

(88)

10.0

SMALL FAB 1

SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1

1- Form dimple for MS20427M3 rivet per dwg D3649
*****ensure dimples are on the proper side*****

2- Assemble nutplates as per dwg D3649

FF 08-07-16
08-07-13 (1)

(1)

11.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

PE 08.07.06
ENGINEERING
APPROVAL

S007/16 @

12.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and stock

Location:

39926-1

FF 08-07-30 (1)

User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: TUNNEL BOTTOM PANEL

Job Number: 36911

Part Number: D3649041

Job Number:



Seq. #:

Machine Or Operation:

Description :

13.0

QC21

FINAL INSPECTION/W/O RELEASE



①

Comment: FINAL INSPECTION/W/O RELEASE

D. Salas/08

mf 08-08-01

Job Completion



POSITIVE RECALL

EFFECTIVE 08-06-31

AUTH U

RELEASED U

DATE 08-07-16

DART AEROSPACE LTD		Work Order: 36911
Description: TUNNEL BOTEH PANEL		Part Number: D3649-1
Inspection Dwg: D3649-1 Rev: 5		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
.098	+ .004 - .001	.099	X			
.196	+ .005 - .001	.199	X			
.250	+ .005 - .001	.254	X			
.400	+/- .010	.400	X			
.385	+/- .010	.385	X			
.350	+/- .010	.350	X			
44.57	+/- .030	44.57	X			
11.70	+/- .030	11.70	X			
3.370	+/- .010	3.370	X			
13.76	+/- .030	13.76	X			
4.300	+/- .010	4.300	X			
10.11	+/- .030	10.11	X			
12.90	+/- .030	12.90	X			
16.61	+/- .030	16.61	X			
15.80	+/- .030	15.80	X			
3.950	+/- .010	3.950	X			
.42	+/- .030	.42	X			
.41	+/- .030	.41	X			
.85	+/- .030	.85	X			
19.64	+/- .030	19.64	X			
.54	+/- .030	.54	X			
1.400	+/- .010	1.400	X			
2.63	+/- .030	2.63	X			

Measured by: JB	Audited by:	Prototype Approval:
Date: 8-7-4	Date: 08/02/04	Date:

Rev	Date	Change	Revised by	Approved
A		New Issue	KJ/JLM	

DART AEROSPACE LTD		Work Order: 36911
Description: TUNNEL RCTEM		Part Number: D3649-1
Inspection Dwg: D3649-1 Rev: 5		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article
 ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
2.93	+/- .030	2.91	x			
1.49	+/- .030	1.49	x			
5.98	+/- .030	5.98	x			
.54	+/- .030	.54	x			
2.70	+/- .030	2.70	x			
2.75	+/- .030	2.75	x			
2.48	+/- .030	2.47	x			
1.16	+/- .030	1.16	x			
3.38	+/- .030	3.375	x			
2.00	+/- .030	2.00	x			
.90	+/- .030	.90	x			
16.64	+/- .030	16.64	x			
.48	+/- .030	.48	x			
13.80	+/- .030	13.80	x			
.46	+/- .030	.46	x			
11.76	+/- .030	11.76	x			
1.23	+/- .030	1.23	x			
.88	+/- .030	.88	x			
18.46	+/- .030	18.46	x			
5.23	+/- .030	5.237	x			
1.932	+/- .010	1.933	x			
1.943	+/- .010	1.943	x			
5.02	+/- .030	5.02	x			

Measured by: <u>FB</u>	Audited by: <u>[Signature]</u>	Prototype Approval:
Date: <u>8-24</u>	Date: <u>08/24</u>	Date:

Rev	Date	Change	Revised by	Approved
A		New Issue	KJ/JLM	

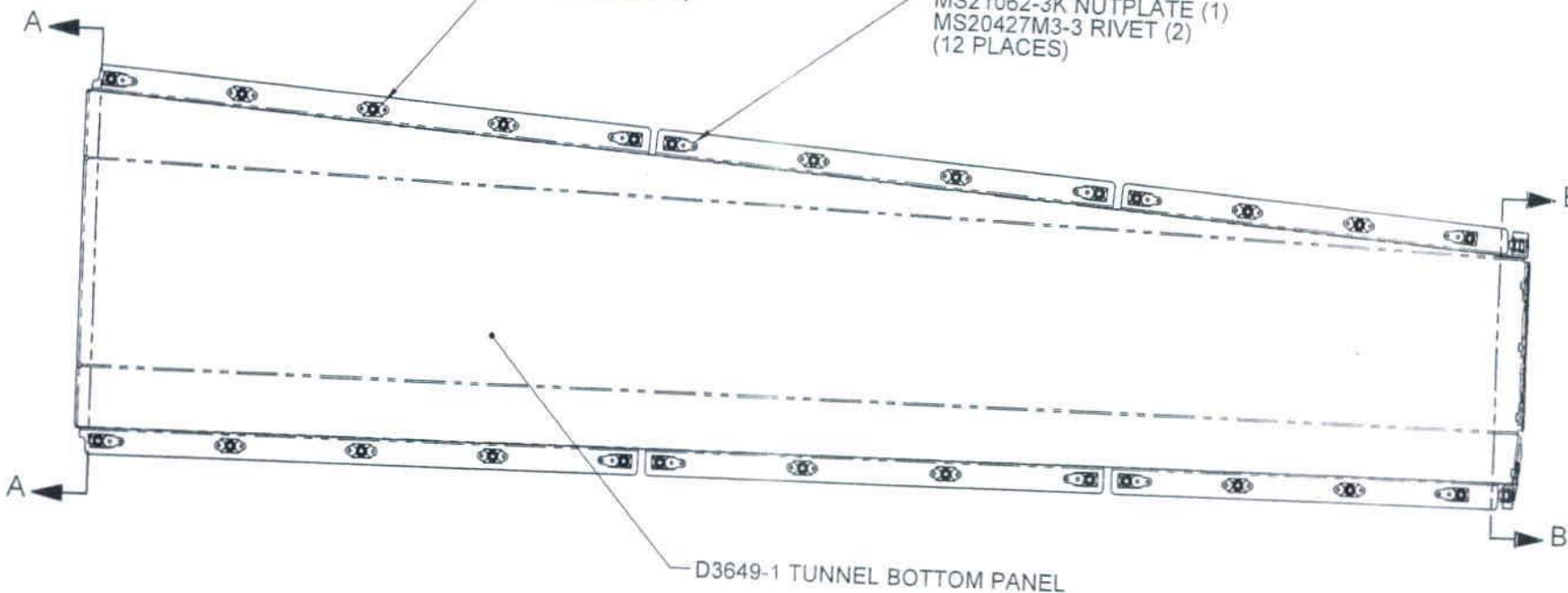


MS21060-3K NUTPLATE (1)
MS20427M3-3 RIVET (2)
(5 PLACES)

MS21062-3K NUTPLATE (1)
MS20427M3-3 RIVET (2)
(4 PLACES)

MS21060-3K NUTPLATE (1)
MS20427M3-3 RIVET (2)
(14 PLACES)

MS21062-3K NUTPLATE (1)
MS20427M3-3 RIVET (2)
(12 PLACES)



D3649-041 BOTTOM PANEL ASSEMBLY

DESCRIPTION
TUNNEL BOTTOM PANEL ASSY.
TUNNEL BOTTOM PANEL
RIVET
NUTPLATE
NUTPLATE

B	PAGE 3: MS20427M3 WAS MS20427M-3
A	NEW ISSUE
REV.	DESCRIPTION
DESIGN	RF
DRAWN	RF
CHECKED	

PRELIM
LA

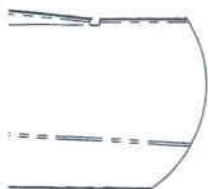
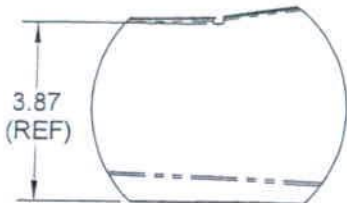
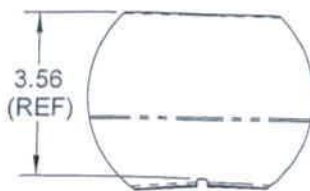
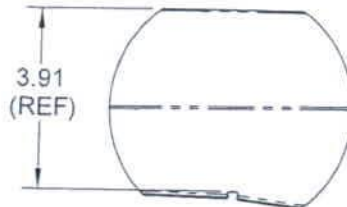
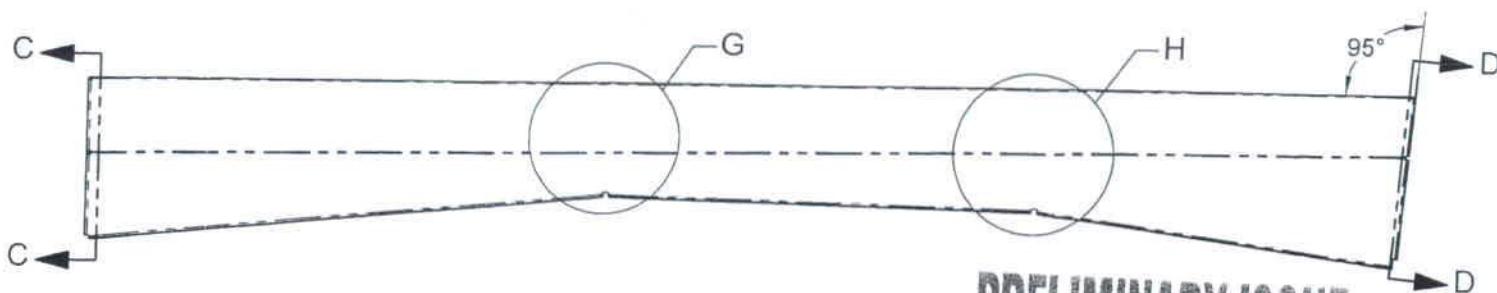
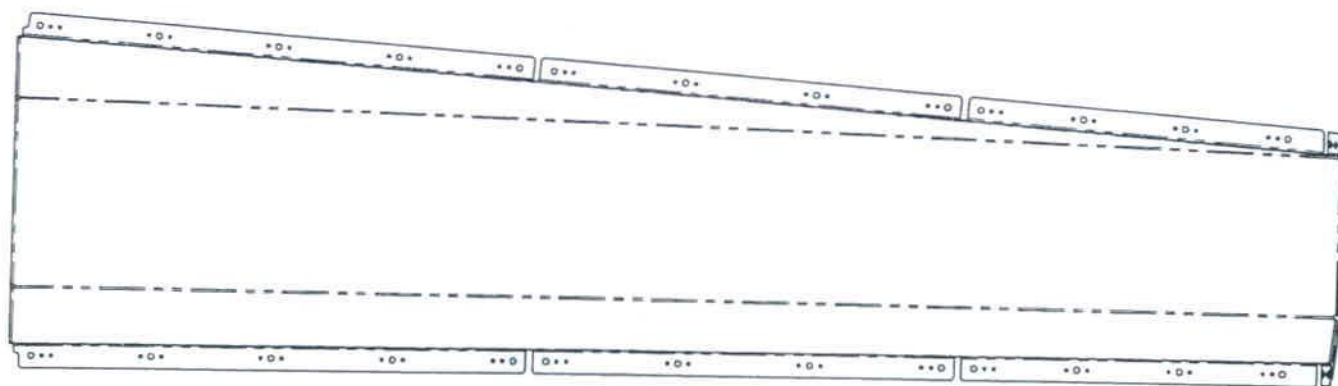
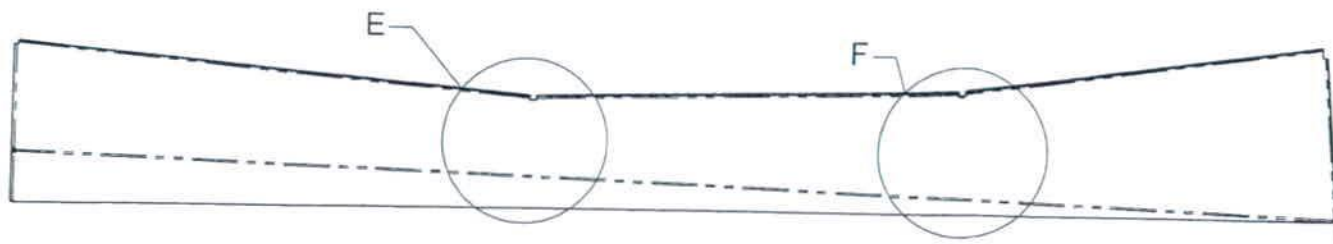
DAR
HAWK

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DETAIL EDETAIL FDETAIL GDETAIL H**PRELIMINARY ISSUE**

LE 08-01.18

EL BOTTOM PANEL
 (FROM D3649-1F)

DESIGN	RF	DART AEROSPACE LTD. HAWKESBURY, ONTARIO, CANADA
DRAWN	RF	
CHECKED	LE	DRAWING NO. D3649
MFG. APPR.	[Signature]	TITLE BOTTOM PANEL ASSEMBLY
APPROVED	[Signature]	
DE APPR.		
DATE	08.01.07	COPYRIGHT © 2007 BY DART AEROSPACE THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

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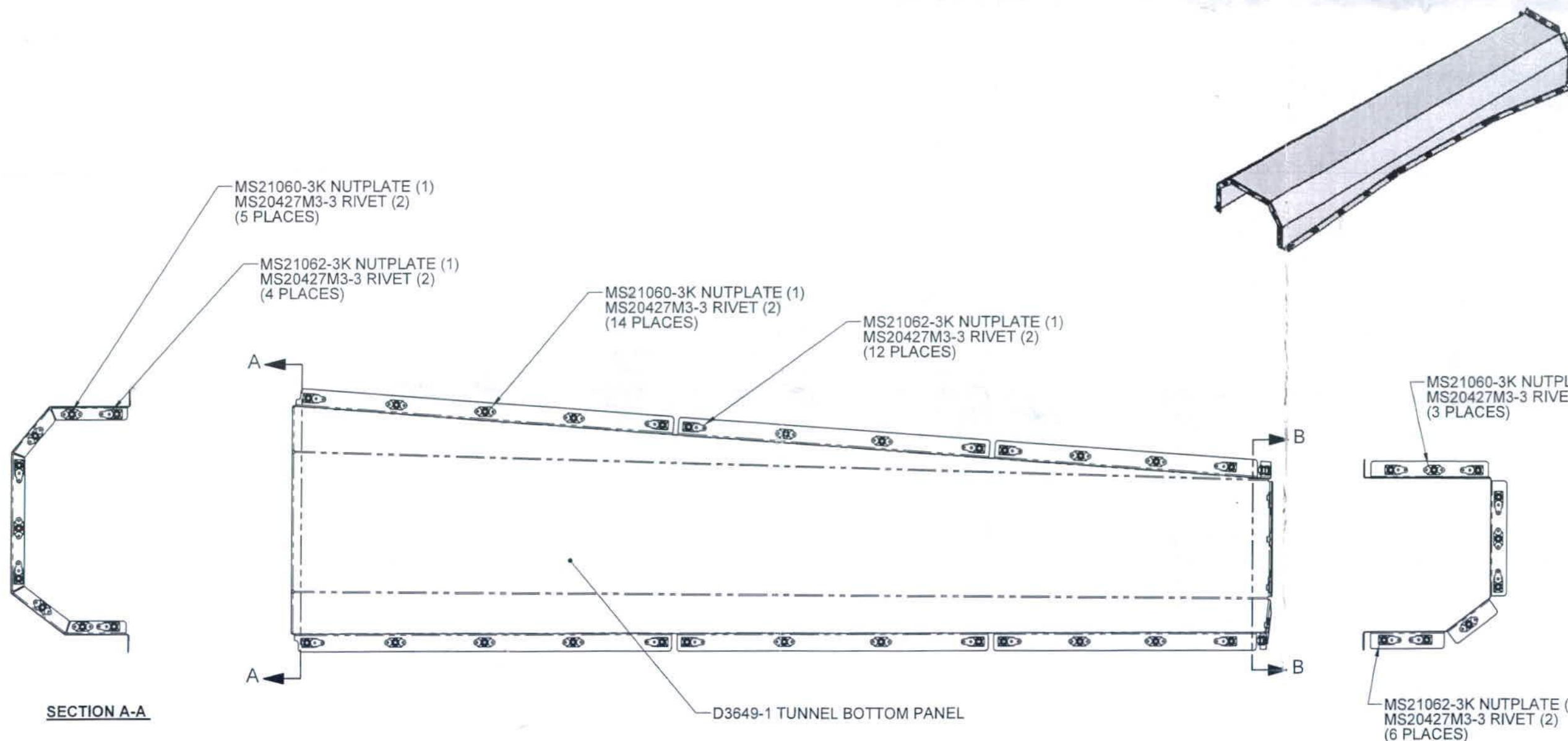
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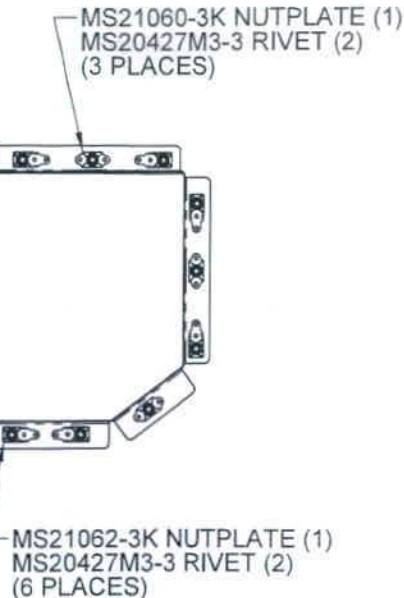
B

A



SECTION A-A

D3649-1 TUNNEL BOTTOM PANEL



SECTION B-B

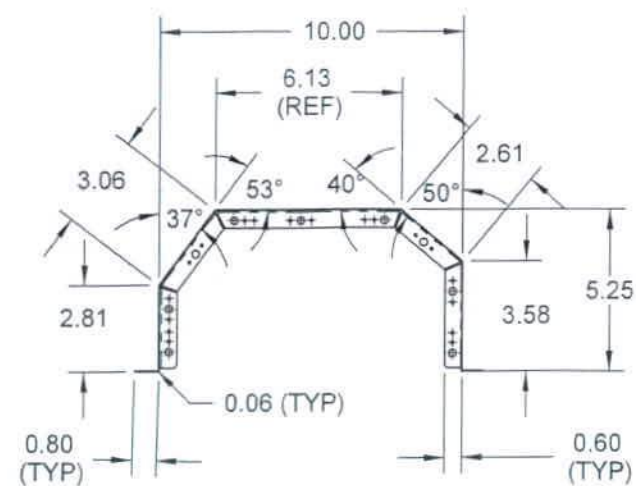
D3649-041 BOTTOM PANEL ASSEMBLY

RELEASED
28-03-28

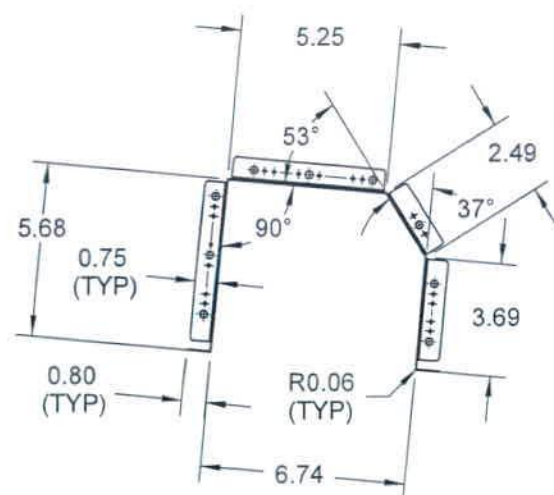
PART LIST

QTY -041	PART NUMBER	DESCRIPTION
X	D3649-041	TUNNEL BOTTOM PANEL ASSY.
1	D3649-1	TUNNEL BOTTOM PANEL
88	MS20427M3-3	RIVET
22	MS21060-3K	NUTPLATE
22	MS21062-3K	NUTPLATE

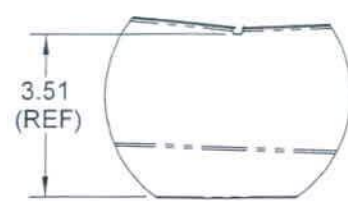
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A	NEW ISSUE	RF	07.11.07
REV.	DESCRIPTION	BY	DATE
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DRAWN	RF		
CHECKED	IE	DRAWING NO.	REV. B
MFG. APPR.	WJ	D3649	SHEET 1 OF 3
APPROVED	WJ	TITLE	SCALE
DE APPR.	WJ	BOTTOM PANEL ASSEMBLY	1:5
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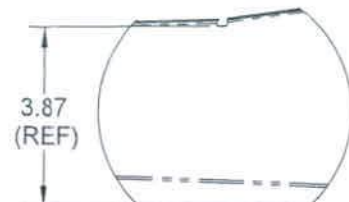
SECTION C-C



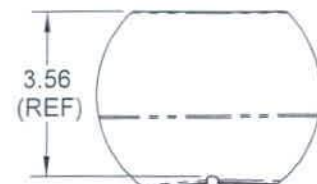
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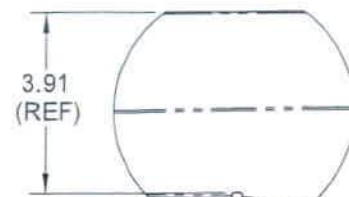
DETAIL E



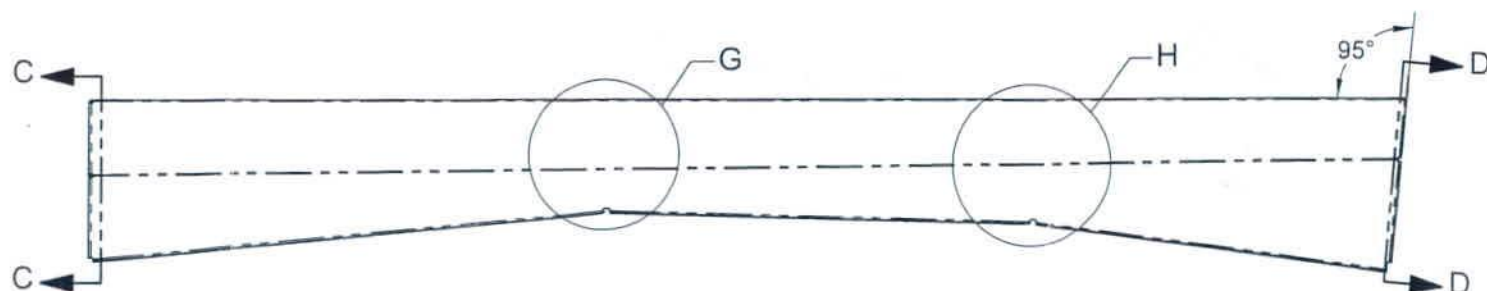
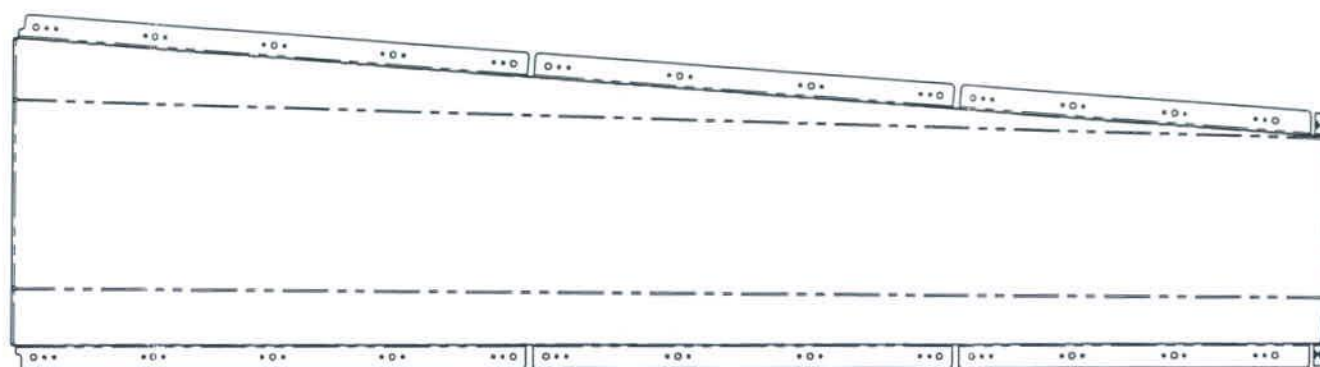
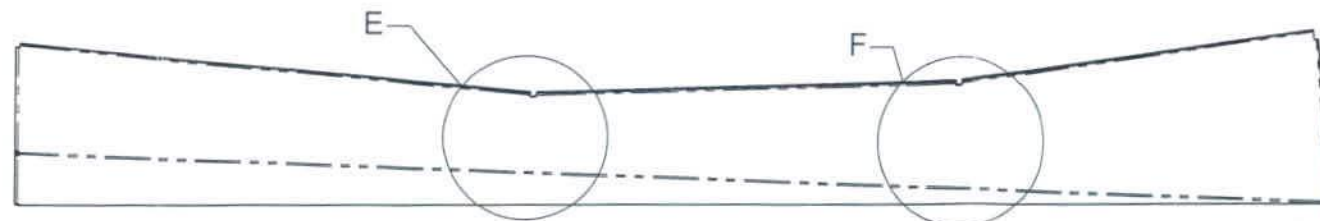
DETAIL F



DETAIL G




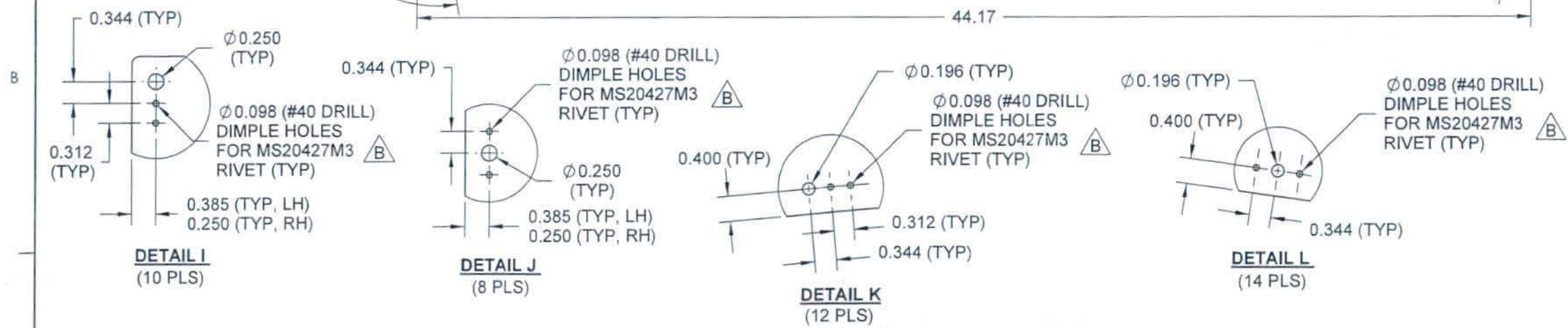
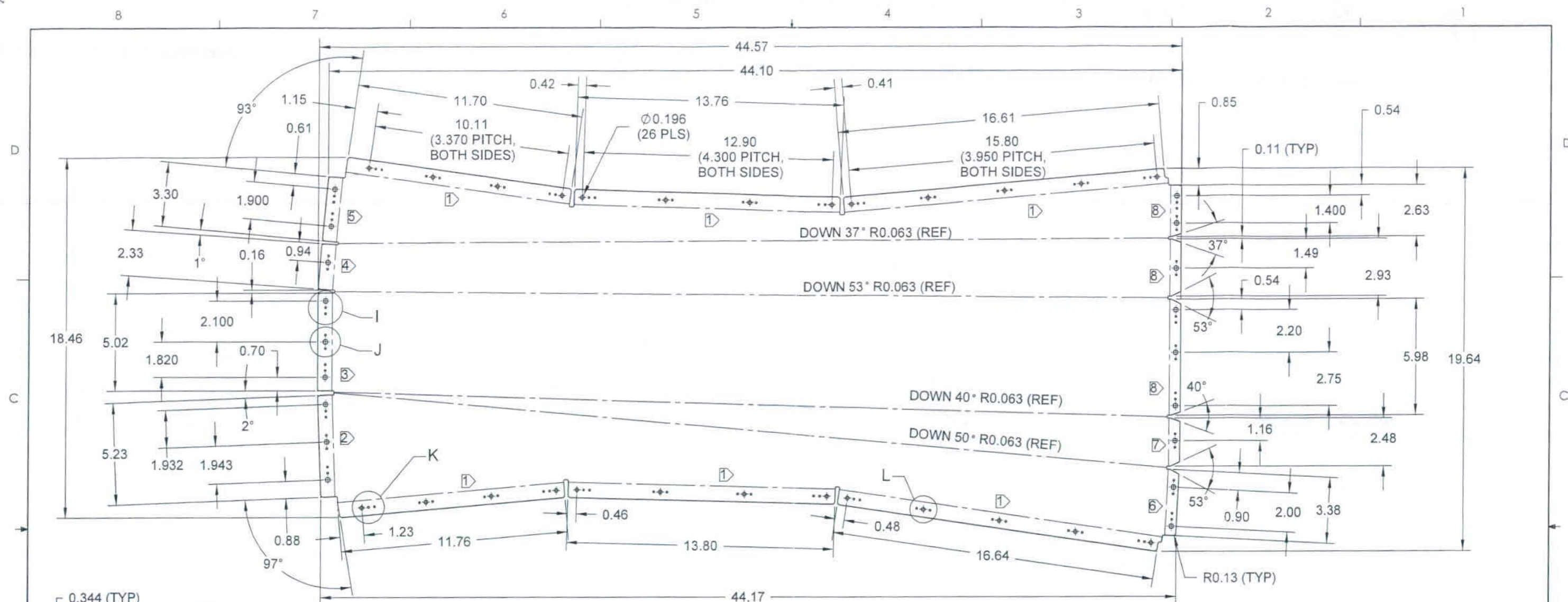
DETAIL H



D3649-1 TUNNEL BOTTOM PANEL.
(MAKE FROM D3649-1F)

RELEASED
08-03-27/1/1

DESIGN	RF	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. B
MFG. APPR.		D3649	SHEET 2 OF 3
APPROVED		TITLE	SCALE
DE APPR.		BOTTOM PANEL ASSEMBLY	1:6
DATE	08.01.07	COPYRIGHT © 2007 BY DART AEROSPACE LTD	
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- 1 UP 90° R 0.063
- 2 UP 94° R 0.063
- 3 UP 85° R 0.063
- 4 UP 87° R 0.063
- 5 UP 90° R 0.063
- 6 UP 94° R 0.063
- 7 DOWN 91° R 0.063
- 8 DOWN 90° R 0.063

NOTES:
 1) MATERIAL: AISI 304/316 STAINLESS STEEL 0.018 THICK (26 GAUGE) SHEET, PER MIL-S-5019 (REF. DART SPEC. M304S26GA)
 2) FINISH: NONE
 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 6) IDENTIFICATION: NONE
 7) WEIGHT: 4.32 lbs

D3649-1F FLAT PATTERN

DESIGN	RF	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	IE	DRAWING NO.	REV. B
MFG. APPR.		D3649	SHEET 3 OF 3
APPROVED		TITLE	SCALE
DE APPR.		BOTTOM PANEL ASSEMBLY	1:5
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RELEASED
08.03.27/11

